

VDOVENKO, V.M.; SUGLOBOVA, I.G.; VAN 1-UY; SUGLOBOV, D.N.

Solubility of uranyl nitrats in mixed solvents. Padiokhimita 6 nc.51532538 '64. (MIRA 18:2)

VDOVENKO, V.M.; SUGLOBOV, D.N.; TARANOV, A.P.

Infrared spectra of uranyl nitrate hexahydrate and its aqueous solutions. Radiokhimila 6 no.52559-568 '64. (MIRA 18:1)

。 1985年 - 1985年 -

VDOVENKO, V.M., otv. red.

[Coprecipitation and adsorption of radioactive elements] Soosazhdenie i adsorbtsiia radioaktivnykh elementov. Moskva, Nauka, 1965. 195 p. (MIRA 18:3)

1. Chlen-korrespondent AN SSSR.

VDOVENKO, V.M., red.; LIBERMAN, N.R., red.

[Spectroscopic methods in the chemistry of complex compounds] Spektroskopicheskie metody v khimii kompleksnykh soedinenii. Moskva, Khimiia, 1964. 267 p. (MIRA 18:2)

1. Chlen-korrespondent AN SSSR (for Vdovenko).

VDOVENKO, V.M.; SUGLOBOVA, I.G.; LADYGIN, I.N.; SUGLOBOV, D.N.

Extraction of uranyl nitrate with tricctylamina from neutral solutions. Radiokhimia 5 no. 6:737-739 '63.

(MIRA 17:7)

VDOVENKO, V.M., SUGLOBOVA, I.G., SUGLOBOV, D.N., DATYUK, Yu.V.

Heat of solution of uranyl nitrate and some of its complex compounds. Radiokhimiia 5 no. 6:739-741 '63. (MIRA 17:7)

VDOVENKO V.M. ROMANOV, G.A.; SHCHERBAKOV, V.A.

Magnetic moments of uranium (1V) ions in aqueous solutions. Radiokhimiia 5 no.5:574--581 '63.

Study of the complex formation of uranium (1V) with fluorine ions by the method of proton resonance. 581-585 (MIRA 17:3)

VLOVENKO, V.M.; LIPOVSKIY, A.A.; NIKITINA, S.A.

Study of the solvation of UO2Cl2 with molecules of organophosphorus compounds by spectral methods. Radiokhimiia 5 no.5:585-591 '63. (MIRA 17:3)

Company to the transfer the company of the company

VDOVENKO, V.M.; KOVALEVA, T.V.; RYAZANOV, I.A.

Extraction of uranyl nitrate with solutions of trioctylamine in o-xylene at 25°C. Radiokhimiia 5 no.5:619-622 '63. (MIRA 17:3)

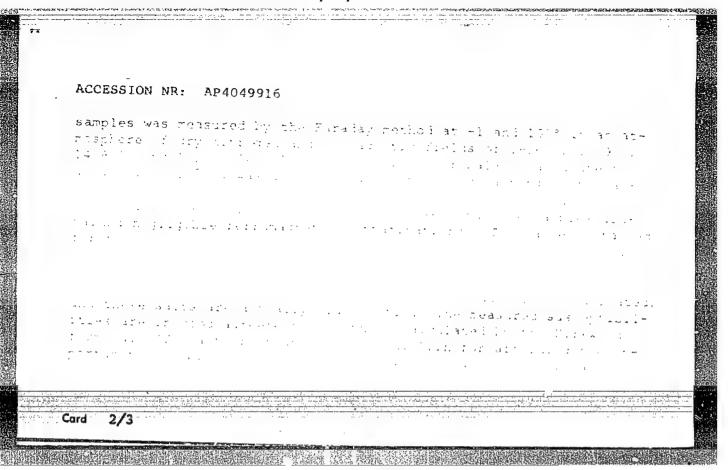
AUTHORS: Wiswerk: W. V. Descriptions region AN SSSR'S Visil'yev,
Ya. W.: Quiasov, Yu. V.

TITLE: Magnetic susceptibility of radius obligate and horide

SOURCE. AN SSSP. Loweleys. An exercise to the formation of radia

ABSTRACT: The purpher of the investigation was to cook on the himself of legist to the first and the formation of the structure and chemical bond of such compounds. The susceptibility of highly purified

Cara 1/3



L 1027 4.5 ACCESSION NR: AP4049916

ASSOCIATION: None

SUBMITTED: 07Jul64

ENCL: 00

SUB CODE: GP, GC NR REF SOV: 005

OTHER: 006

Cora 3/5

ALEKSANDROV, N.M.; VDOVENKO, V.M.; SOKOLOV, A.P.; SHCHERBAKOV, V.A.

Nuclear magnetic resonance of the crystal hydrates of uranyl nitrate. Zhur.strukt.khim. 4 no.5:762-763 S-0 163. (MIRA 16:11)

l. Nauchno-issledovatel skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta i Radiyevyy institut imeni V.G.Khlop-kina AN SSSR.

VDOVENKO, V.M.; LIPOVSKIY, A.A.; NIKITINA, S.A.

Hydrogen bonding in alkyl ammoniun salts. Part 2: Infrared spectra and structure of tridecyl ammonium chloride. Radiokhimiia 6 no. 1:56-62 '64. (MIRA 17:6)

ACCESSION NR: AP4009949

s/0186/63/005/006/0737/0739

AUTHOR: Vdovenko, V. M.; Suglobova, I. G.; Lady*gin, I. N.; Suglobov, D. N.

TITLE: The extraction of uranyl nitrate by trioctylamine from neutral solutions

SOURCE: Radiokhimiya, v. 5, no. 6, 1963, 737-739

TOPIC TAGS: trioctylamine, uranyl nitrate, dihydrate, benzene solution, NO sub 3 spectrum, organic phase, equilibrium constants, external cations, oscillation spectrum

ABSTRACT: An investigation has shown that substantial quantities of uranium can be extracted from aqueous solutions of uranyl nitrate which do not contain any free acid. The various phases of the uranyl nitrate concentration were brought into equilibrium by shaking it up in ampules at 25C for a period of 20-22 hours. The uranium concentration in the phases was determined by gravimetric and colorimetric methods, while the trioctylamine (TOA) concentration was preset.

Card 1/2

ACCESSION NR: AP4009949

The results achieved in these experiments show that in the case of a constant uranyl nitrate concentration in an inorganic phase, there is a rectilinear (or almost rectilinear) relationship between the uranium and trioctylamine concentrations in a benzene layer. After the contact with the uranyl nitrate dihydrate, the TOA-uranium ratio in the solution is almost exactly 1:1. When charged to an aqueous solution, the TOA-U ratio in the organic phase increases rapidly with the reduction of uranyl nitrate in the water reaching a magnitude of 5.8 for a 17% aqueous solution. Excessive TOA may exist in the form of free molecules if the hydrolysis continues to the end. Orig. art. has: 2 figures, 1 formula and 2 tables.

ASSOCIATION: none

SUBMITTED: 28Feb63

DATE ACQ: 07Feb64

ENCL: 00

SUB CODE: EL, CH

NO REF SOV: 002

OTHER: 005

Ca	rd	2	/	2

VDOVENKO, V. M.; GEDEONOV, L. I.; IVANOVA, L. M.; et al

"Contamination of Oceans by Long-Lived Isotopes according to Data Obtained by Soviet Investigations."

report submitted for 2nd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

VDOVENKO, V.M.; ROMANOV, G.A.

Stability of fluoride complexes of tetravalent uranium. Atom.
energ. 15 no.2:168-169 Ag '63. (MIRA 16:8)

(Uranium compounds) (Fluorides)

VLOVENKO, V.M.; ROMANOV, G.A.; SHCHERBAKOV, V.A.

Shift of bands in the absorption spectra of U (1V) during the fluoride complex formation. Radiokhimiia 5 no.4:511-513 '63.

(MIRA 16:10)

(Uranium compounds)

(Fluorides)

VDOVENKO, V.M.; SUGLOBOV, D.N.; KRASIL'NIKOV, V.A.

Infrared absorption spectra of uranyl nitrate and complexes
with neutral addends. Radiokhimita 5 no.3:311-319 '63.

(Uranyl nitrate—Absorption spectra)

(Complex compounds—Absorption spectra)

L 17376-66 EPF(n)-2/EWT(m)/EWP(t) IJP(c)

IJP(c) WW/JD/JG

ACC NR: AP6004504

SOURCE CODE: UR/0186/65/007/005/0509/0516

AUTHOR: Vdovenko, V. M.; Lipovskiy, A. A.; Nikitina, S. A.; Yakovleva, N. Ye.

ORG: none

40

TITLE: Investigation of the extraction of U^{IV} and U^{VI} from hydrochloric acid solutions by means of tri-n-butylphosphate

SOURCE: Radiokhimiya, v. 7, no. 5, 1965, 509-516

TOPIC TAGS: uranium, organic phosphorus compound, solvent extraction, complex molecule

ABSTRACT: The <u>uranium</u> was extracted from the aqueous phase by forming the complex compounds which accumulated in the organic phase. The optical method (percent transmission of 400-700 millimicrons) was applied to measurement of the concentration of uranium-tri-n-butylphosphate complexes in the organic phase. The extractions were conducted using either 20% in CCl₄ or 100% TBP. In the extraction experiments 0.5-12.8 molac HCl solutions and 5-10.9 molar LiCl solutions were used. It was found that the composition of the complexes formed is a function of both the

UDC: 542.61:546.791.4²791.6

Card 1/2

L 17376-66

ACC NR: AP6004504

0

HCl concentration in the aqueous phase and the TBP concentration in the inert solvent. In the case of U^{VI}, the following complexes were found in the extracts: U0₂Cl₂(TBP)₂, U0₂Cl₂(TBP)₃, and a complex anion [U0₂Cl₃(TBP)_n]. In the case of U^{IV}, the organic phase contained UCl₄(TBP)₂, UCl₄(TBP)₃, and a complex anion UCl₆². Under the conditions near saturation equilibrium, both the U^{IV} and the U^{VI} are combined with two molecules of TBP. In the case of an excess of TBT, the complex involves three molecules of TBP. In the case of higher HCl concentration in the starting aqueous solution, accompanied by an excess of TBP, the extract contains anionic complexes of U^{IV} and U^{VI}. Orig. art. has: 2 figures, 2 tables, 6 formulas.

SUB CODE: 07/

SUBM DATE: 02Nov64/

ORIG REF: 013/

OTH REF: 006

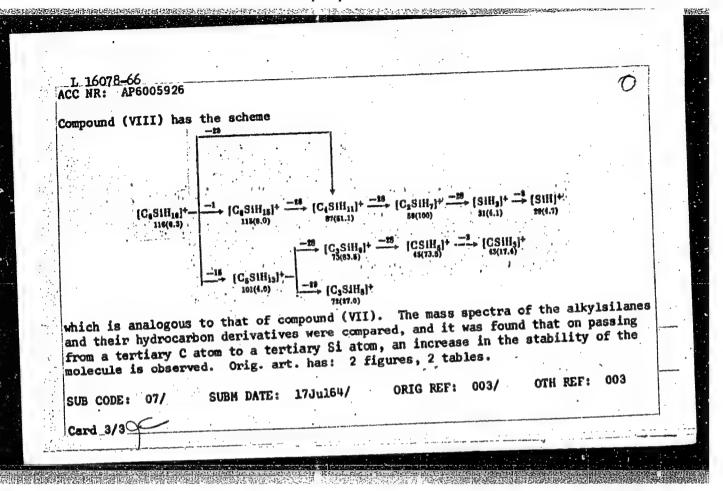
Card 2/2 net

VDGVENKO, V.M.; GURIKOV, Yu.V.; LEGIN, Ye.K.

Hydration of cations in heavy water. Atom. energ. 19 no.5:
(MIRA 18:12)

	L 16078-66 EWT(m)/EWP(j) RM SOURCE CODE: UR/0079/66/036/001/00	89/0096
10.0	T-TOW ADECIDED IN	
AUT	THRO: Chernyak, N. Ya.; Khmel'nitskiy, R. A.; D'yakova, T. V.; Vdovin,	7. 5.
	RG: Institute of Petrochemical Synthesis, Academy of Sciences SSSR (Inst eftekhimicheskogo sinteza Akademii nauk SSSR)	38
nei	ITLE: Mass spectra study of alkylsilanes	B
	OURCE: Zhurnal obshchey khimii, v. 36, no. 1, 1966, 89-96	:-
500	OPIC TAGS: organosilicon compound, mass spectrum, silane, ionization	
1 1	ADD ALLY	ucture of
pr	dimethyldiethylsilane (VII), and methyldiethylsilane (VIII). The corresponding thylethylpropylsilane (VIII), and methyldiethylsilane (VIII). The corresponding to the correspond	
	is $\{C_4SiH_{11}\}^*$ $\{C_4SiH_{11}\}^*$ $\{C_4SiH_{11}\}^*$ $\{C_4SiH_{11}\}^*$ $\{C_4SiH_{11}\}^*$	
is		
is	$ \begin{array}{c c} \{C_8SiH_{16}\}^{+} & \xrightarrow{-29} \{C_8SiH_9\}^{+} & \xrightarrow{-29} \{CSiH_9\}^{+} & \xrightarrow{-2} \{CSiH_9\}^{+} \\ \text{(92(10)} & \text{(92(10))} \end{array} $	

L 16078-66		and the second s
CC NR: AP6005926		0 .
ragment ion, the figure ng peak in % of maximum ion, and the solid arred by means of a metastas similar. For compou	$ \begin{array}{c} $	nsity of the correspondates a probable transifragment ion demonstration of the scheme CSIII CSIIII CSIII CSIIII C
116(5.1) -2	$ \begin{array}{c} 29 \\ + C_4 \text{SiH}_{11} \text{J}^+ \\ 97(100)' \end{array} + C_2 \text{SiH}_7 \text{J}^+ \\ + C_2 \text{SiH}_7 \text{J}^+ \\ - 28 \\ + (SiH_3)^+ \end{array} + [SiH_3]^+ $	
nd the dissociative io	onization of compound (V) is similar	· · · · · · · · · · · · · · · · · · ·
nd the dissociative io	onization of compound (V) is similar. $\begin{array}{c} -29 \\ C_4 \text{SiH}_{18} \\ 118(84.1) \end{array} \xrightarrow{-28} \{C_4 \text{SiH}_{11} \\ 81(100) \end{array} \xrightarrow{-28} \{C_5 \text{SiH}_7 \\ 44(38.4) \end{array}$	-18 (SIE)+ -1 (SIE)+



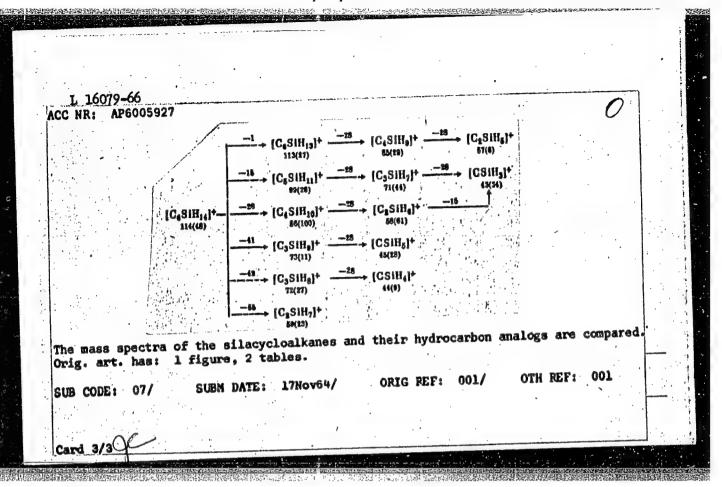
AUTHOR: Chernyak, N. Ya.; Khmel'nitskiy, R. Arkhipova, T. N. ORG: Institute of Petrochemical Synthesis, A neftekhimicheskogo sinteza Akademii nauk SSSR TITLE: Hass spectra study of silacycloalkane SOURCE: Zhurnal obshchey khimii, v. 36, no. TOPIC TAGS: mass spectrum, organosilicon com	ademy of Sciences SSSR (Institut 8
Arkhipova, T. N. DRG: Institute of Petrochemical Synthesis, A neftekhimicheskogo sinteza Akademii nauk SSSR TITLE: Hass spectra study of silacycloalkane SOURCE: Zhurnal obshchey khimii, v. 36, no. TOPIC TAGS: mass spectrum, organosilicon com	ademy of Sciences SSSR (Institut 8
rkhipova, T. N. PRG: Institute of Petrochemical Synthesis, A meftekhimicheskogo sinteza Akademii nauk SSSR PITLE: Hass spectra study of silacycloalkane SOURCE: Zhurnal obshchey khimii, v. 36, no. POPIC TAGS: mass spectrum, organosilicon com	ademy of Sciences SSSR (Institut 8
TITLE: Hass spectra study of silacycloalkane SOURCE: Zhurnal obshchey khimii, v. 36, no.	1, 1966, 96-101
TITLE: Hass spectra study of silacycloalkane SOURCE: Zhurnal obshchey khimii, v. 36, no.	ار 1966 م
SOURCE: Zhurnal obshchey khimii, v. 36, no.	1, 1966, 96-101
TOPIC TAGS: mass spectrum, organosilicon com	
TOPIC TAGS: mass spectrum, organosilicon com	ound, hydrocarbon, lonization
•	, , , , , , , , , , , , , , , , , , ,
	accomplete (T), 1.1-dimethylsilacy-
clopentane (II), 1,1-dimethy1-1-silacyclonexa	studied. Correlations were establish-
ed between the mass spectra and the structure bable dissociative ionization schemes of the	
pound (I), the scheme is as follows:	
bable dissociative ionization schemes of the pound (I), the scheme is as follows:	silacycloatkanes are given. For com

L 16079-66

ACC HR: AP6005927

(where solid arrows denote transitions demonstrated by means of a study of "meta-stable" ions; broken-line arrows indicate proposed transitions; figures above the arrows denote the mass of the detached fragment; figures below the formulas show arrows denote the mass of the fragment ion; and figures in parentheses denote the intensity of the peak of the given ion in percent of maximum intensity taken as 100%. The dissolutive ionization schemes of compounds (II) and (III) are analogous to the above ciative ionization of ions in the spectra of (I) and (V) are also similar, but the presence of a hydrogen atom linked to the Si atom complicates the picture. The following scheme is proposed:

Card 2/3



ACC NR: AT6019044

(N)

SOUNCE COLE: VE/CUTS/66/011/002/0252/0255

AUTHOR: Vdovenko, V. M.; Pomanov, G. A.; Shcherbakov, V. A.

ORG: none

TITLE: Uranium (IV) fluoride complexes in solutions of aluminum salts

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 2, 1966, 252-255

TOPIC TAGS: uranium compound, fluorine compound, aluminum compound, spectrophotometric analysis, proton resonance, stability constant

ABSTRACT: The behavior of U(IV) fluoride complex compounds in aqueous solutions of Al salts was studied by the spectrophotometric and proton resonance methods. Initial solutions of tetravalent U were obtained electrochemically by reduction of U(IV) in 1 N HClO₄. Two series of solutions were prepared, the first set having a constant concentration of 0.048 mole/l of U(IV) with 1 ion of U per 1 ion of F and various contents of Al(Cl₄)₂, and the second solutions having a constant concentration of 0.042 mole/l U(IV) with a ratio of U(IV): F ions = 2:1 and the amount of Al(ClO₄)₃ varying from 0 to 0.131 mole/l. The absorption spectra were taken with an SF-2M spectrometer in the 440-750 mµregion of both series of solutions and the relative time of proton relaxation (T₁) was measured in the second set. The absorption spectra showed that practically all of the U(IV) in the first series of solutions was in the

Card . 1/2

UDC: 543.4 : 546.791.41161

ACC NR: AP6019044

form of UF3+. The spectrum of UF3+ changed with increased concentration of Al in solution. The UF3+ underwent decomposition with the formation of Al fluoride complexes. The degree of decomposition of the UF3+ complex depended on the ratio of stability constants of fluoride complexes of Al and U(IV). This ratio was calculated (see Table 1) from spectral data for various concentrations of Al. It is apparent from the table

	34 .	(IA)	. [U+1]	[01/1+]	Kupst/ /Kapst	132	[Al] ₆	ַ (נייט)	[UIN+]	Kupi-/
Table 1.	1 2 3 4	0 0,26 0,16 0,525	0 0,604 0,003 0,007	0,048 0,044 0,045 0,041	640 650 410	5 6 7 8	0,79 1,65 1,31 1,57 a V	0,009 0,0109 0,012 0,013 erag	0,039 0,037 0,035 0,635 e 340	303 325 325 318

that the Kup3+: Kalp++ ratio varied within a relatively narrow range (313 to 640 with an average of 440), although the ionic power of the solutions varied considerably (from 1.5 to 11). Therefore, the Kup3+ was determined as 6 x 10° from this average (from 1.5 to 11). Therefore, the Kup3+ was determined as 6 x 10° from this average ratio. This agreed satisfactorily with the literature data. The stability constant of UF2+ was determined as Kup4+ = 7 x 10° by calculating the data on the absorption spectra of the second set of solutions. Calculations of the data obtained during proton resonance studies of the second set of solutions yielded August at A 10°. The curve depicting the changes of 1/T₁ (proton resonance method) curling the changes of Al(ClO₂)₃ substantiated the conclusions of the spectrophotometric madicals on decomposition of the UF3+ after the addition of Al ions. Orig. art. The conclusions of the spectrophotometric madicals on decomposition of the UF3+ after the addition of Al ions. Orig. art. The conclusions of the conclusions of the spectrophotometric madicals on the composition of the UF3+ after the addition of Al ions. Orig. art.

PISARENKO, G.S.; VDOVENKO, V.V.; GOGOTSI, G.A.; GRYAZNOV, B.A.; KRAVCHUK, L.V.; KURIAT, R.I.; TRET YACHENKO, G.N.

System for testing materials in a high-temperature flow. Znerg. i elektrotekh. prom. no.4:22-23 O-D *64. (MIRA 18:3)

	. 1
L 31115-66 EWT(1)/EWP(m)/EWT(m)/EWP(w)/EWA(W)/EWP(v)/T/EWP(v)/EWP(k)/EWA(1)/	1
AT6008671 (N) ETC(m)-6 IJP(c) JD/EM/_SQUECE CODE: UR/0000/65/000/000/0261/0268	
AUTHORS: Pinarenko, G. S. (Academician AN UkrSSR) (Kiev); Tret'yachenko, G. N. (Kiev); Gogotsl, G. A. (Kiev); Kravchuk, L. V. (Kiev); Kuriat, R. L. (Kiev); Vdovonko, V. V. (Kiev); Gryaznov, B. A. (Kiev)	
ORG: none	
TITLE: Apparatus for investigating characteristic strength of materials and structural elements in high-temperature gas streams	٠.
Total To Ean octoding	,
SOURCE: Vsesoyuznoye soveshchaniye po yoprosam staticheskoy dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh	
temperaturakh, 3d, Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 261-268	
TOPIC TAGS: high temperature strength, gas flow, temperature test, test chamber,	
ABSTRACT: The details of a test apparatus for investigating the high-temperature strength of materials and parts are described. This apparatus is used to evaluate the fatigus strength of brittle and plastic structural elements (such as gas turbine blades), the thermal shock characteristics of various materials, their thermal	
·	

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210016-8"

L 31115-66

ACC NR: AT6008671

stability, oxidation resistance at high temperatures, etc. The apparatus consists of a gas dynamic test bed, a high-temperature flow generator (from 600 to 3000K), and an instrumentation complex for measuring and recording the flow temperature and other parameters. The gas flow can attain velocities up to Mach 1.5 at a flow rate of 1.7 kg/sec, and pressures of 80 newtons/cm². The air stream is heated successively in three combustion chambers and pumped through a blow-through chamber. Three types of blow-through chambers are used as test sections: one for a continuous test run, another for a controlled duration test run, and a third type for instantaneous exposure and removal of the model. The instrumentation consists of thermocouples, automatic recording potentiometers, calorimeters, pyrometers, oscillograms, and flow meters. The apparatus also contains a device for controlling the mixture of the test gas. Orig. art. has: 4 figures.

SUB CODE :20,13/ SUBM DATE: 19Aug65

Card 2/2 9 0.

ALEKSEYEVA, G.K.; YEGOROVA, G.D.; MINAYEVA, Ye.V.; SVIRKINA-DEMINA, G.G.; NOVIK-ZOLOTOVA, L.N.; SPYSHNOV, P.A., titul'nyy red.; NOVITSKIY, L.M., nauchn. red.; VDOVENKO, Z.I., red.; GOL'BERG, T.M., tekhn.red.

[Album of new recommended construction equipment] Al'bom novoi stroitel'noi tekhniki rekomenduemoi k vnedreniiu.

Moskva, Gosstroiizdat. No.7. [Sanitary equipment] Sanitarno-tekhnicheskoe stroitel'stvo. 1963. 84 p.

(MIRA 16:11)

(Municipal engineering—Equipment and supplies)
(Sanitary engineering—Equipment and supplies)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210016-8"

S/081/63/000/004/026/051 B149/B186

AUTHORS: Ashastin, R., Khachatryan, T., Vdovets, A., Perlov, Ye.,

Eyring, E.

TITLE: Simultaneous production of acetylene and ethylene by thermal

pyrolysis of gaseous gasoline

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 450 - 451, abstract 4N10 (Ayastani ardyunaberutyuny, no. 4, 1962, 56-59

[Arm.]; Prom-st' Armenii", no. 4, 1962, 50 - 52 [Russ.])

TEXT: $C_{2}H_{2}$ and $C_{2}H_{4}$ are obtained by pyrolysis of gaseous gasoline with b.p. 28 - 150°, in apparatus yielding 40 - 70 kg/hr raw material. Fuel gas (H_{2} , natural gas etc.) undergoes combustion to O_{2} in a special burner in a water-cooled chamber. The gases are mixed with gasoline vapors in a mixer at 2000° and passed to a reactor whose walls are protected from deposition of coke and carbon black by a film of water. On leaving the reactor the gases, containing 8 - 11% $C_{2}H_{2}$ and 9 - 15% $C_{2}H_{4}$ by volume are rapidly cooled to terminate the reaction; after final cooling in the scrubber and washing Card 1/2

Simultaneous production of ...

S/081/63/000/004/026/051 B149/B186

free of tars the gases are channeled to the separator. Data supplied: flow sheet of apparatus, composition of gases obtained, flow-rate coefficients and economic assessment of the method. [Abstracter's note: Complete translation.]

Card 2/2

VDOVETS, F.Ye., inzh.; REVZINA, L.A., inzh.

New structures for protecting the shores of the Black Sea.

Transp.stroi. 15 no.10:19-21 0 '65.

(MIRA 18:12)

· 《中心》中的中的自然是是一种特别的自然的是是不知识的自然的是是是一种的自然的有效。

ASHASTIN, R., kand.tekhn.nauk; KHACHATRYAN, T., inzh.; VDOVETS, A., inzh.; PERLOV, Ye., inzh.; EYRING, E., inzh.

Using the method of thermal pyrolysis of casinghead gasoline for the simultaneous production of acetylene and ethylene. Prom.Arm. 5 no.4:50-52 Ap '62. (MIRA 15:5)

1. ArmNIIKHIMPROYEKT.
(Armenia--Natural gas) (Acetylene) (Ethylene)

THE RESIDENCE OF THE PARTY OF T

VDOVETS, P. Z. and BEREZNITSKIY, V. S.

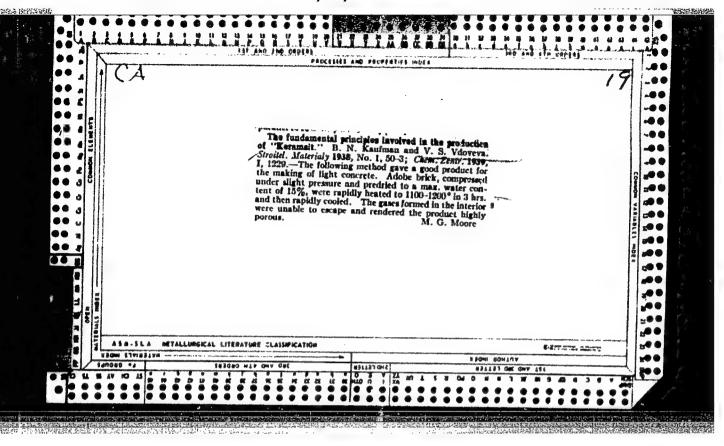
"Dimensions and Base Diagrams of Electron Tubes," (Gaberity i tsokolevka elektronnykh lamp), "Sovetskoye radio," 1949, 23 pp of text and 354 sheets of sketches.

VDOVETS, S., inzhener.

Let us do away sooner with primitive working methods. Prof. -tekh.

obr. 11 no.2:7-9 '54. (MLRA 7:6)

(Buriat-Mongolia--Farm mechanization) (Farm mechanization-Buriat-Mongolia)



HOFLER, E.; AV.III, F.; MINLAVZIG, U.; PONIZ, R.; GOGAR, P.; GRUDEN, F. DOBBIG, J.; VAJOA, B.; MLAKAR, F.; VIRANT, J.; VDCVIG, J.; JRRES, P.; GTRIANG, I.; STARIG, P.; SKUBIG, I.; MAGAJNA, B.; MERSIG, N.; LECHARDIG, D.; PIRMAJUR, E.; GAJR M. R.

New books and periodicals. Elektr vest 17 no.1/2:46-56 Ja-F 164.

NOSOV, M.P.; VDOVICHENKO, A.A.

Effect of time and temperature on the spontaneous modification of polyamida fiber anisotropy. Izv.vys.ucheb.zsv.; tekh.tekst. prom. no.3:23-28 '61. (MIRA 14:7)

1. Kiyevskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna. (Textile fibers, Synthetic)

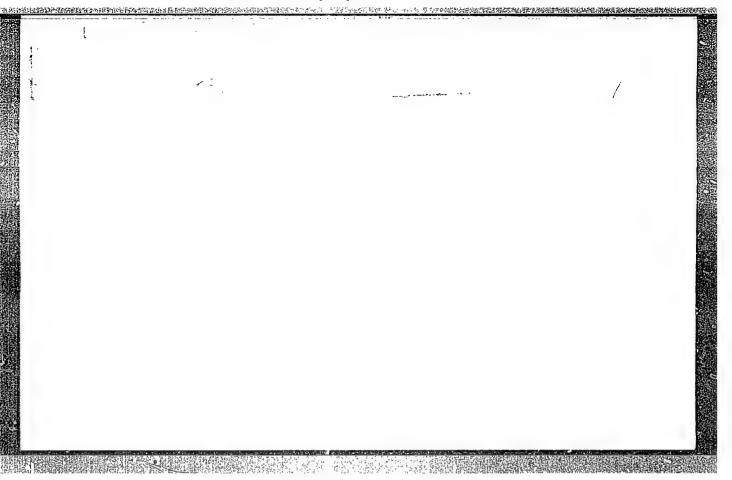
NOT THE OWNER OF THE PROPERTY OF THE PROPERTY

VDOVICHENKO, A.A.

Training of supervisors for wire-broadcast networks. Vest. sviazi 20 no.2:28-29 F '60. (MIRA 13:5)

1. Zamestitel' nachal'nika L'vovskoy direktsii radiotranslyatsion-nykh satay.

(Wire broadcasting)



NOSOV, M.P.; VDOVICHENKO, A.A.; PAKHOMOVA, L.N.

Effect of the conditions of the medium on spontaneous changes in the anisotropy of unoriented nylon fibers. Izv.vys.ucheb. zav.; tekh.tekst.prom. no.2:19-23 '63. (MIRA 16:6)

l. Kiyevskiy filial Vsesoyznogo nauchno-issledovatel skogo instituta iskusstvennogo volokna.
(Nylon-Testing)

VDOVICHENKO, A.A.

Merits and shortcomings of the new AVK-1 wire broadcasting output commutation equipment. West. sviazi 21 no.7:14 Jl '61. (MIRA 16:7)

1. Zamestitel* nachal*nika L*vovskoy direktsii radiotranslyatsionnoy seti.

(Wire broadcasting-Equipment and supplies)

VDOVICHENKO, Dmitriy Ivanovich; BACHINKIN, G.I., red.; YEPIFANOV, M.P., red.; YERKHOVA, Ye.A., tekhn. red.

[The national bourgeoisie of Turkey] Natsional naia burzhuaziia Turtsii. Moskva, In-t mezhdunarodnykh otnoshenii, 1962. 265 p. (MIRA 16:4)

(Turkey—Economic policy)
(Turkey—Politics and government)

THE RELATIONSHIP THE PRESENCE OF THE PROPERTY OF THE PROPERTY

MANUKYAN, A.A.; RYDVANOV, N.F.; BELOUS, T.Ya.; SVIRIDOVA, Z.P.; CHEBOTAREVA, Ye.A.; SHUMILIN, V.I.; PUDINA, K.V.; LUTSKAYA, Ye.Ye.; BRAGINA, N.M.; SANDAKOV, V.A.; MUSSO, S.; ZABLOTSKAYA, A.I.; VLOVICHZNKC, D.I.; MIRKINA, I.Z.; MORENO, I.; SIDOROV, V.F.; FOKLYARSKIY, B.I.; GRECHIKHIN, A.A.; KOSOVA, V.A.; KULIKOV, N.I.; ZHDANOVA, L.P.; ROZENTAL', Ye.I.; PETRANOVICH, I.M.

[Economic conditions of capitalist countries; survey of economic trends in 1961 and the beginning of 1962] Ekonomicheskoe polozhenie kapitalisticheskikh stran; kon'iunkturnyi obzor za 1961 g. i nachalo 1962. g. Moskva, Izd-vo "Pravda," 1962. 157 p. (MIRA 16:9)

 Sotrudniki kon"yunkturnogo sektora Instituta mirovoy ekonomiki i mezhdunarodnykh otnosheniy AN SSSR. (Economic history)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210016-8"

Vdovicherke, G. C.

3-58-4-3/34

TOTAL SECTION OF THE PROPERTY OF THE PROPERTY

AUTHORS:

Vdovichenko, G.G., and Voytko, V.I., Candidates of Philoso-

phical Science

TITLE:

Educate Students in the Spirit of Atheism (Vospityvat'

studentov v dukhe ateizma)

PERIODICAL:

Vestnik Vysshey Shkoly, 1958, # 4, pp 10-13 (USSR)

ABSTRACT:

A course in the "Fundamentals of Atheism", introduced this year at Ukrainian schools, will include 24 lecture hours at the humanitarian and medical vuzes, and 14 hours at other vuzes. It includes the following 9 themes: The Contrast Between Science and Religion; The Science of Religion's Origin; The Origin and Social Principles of Christianity; The Reactionary Nature of Catholicism; The Criticism of the Ideology of Orthodoxy; Religious Sectarianism and its Reactionary Role; Judaism, Buddhism, Islam; The Attitude of the Communist Party and Soviet State Towards Religion and Church; Forms and Methods of Scientific-Atheistic Propaganda.

AVAILABLE:

Library of Congress

Card 1/1

LEVIT, Z.: V.DOVICHENKO, K.

Measuring labor productivity in instrument manufacturing Biul. nauch. inform.; trud i zar. plata 3 no. 1:3-10 60. (MIRA 13:6)

(Instrument industry--Labor productivity)

ACC NR: AT6033314 (N) SOURCE CODE: UR/0000/66/000/000/0105/0108

AUTHOR: Vdovichenko, L. A. (L'vov); Cherkashin, O. F. (L'vov)

ORG: none

TITLE: Electrodynamic generator for hydroacoustic pulses

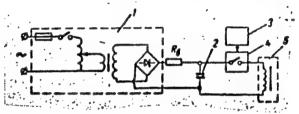
SOURCE: AN UkrSSR. Voprosy prikladnoy akustiki i vibratsionnoy tekhniki (Principles of applied acoustics and vibration technology), Kiev, Naukova dumka, 1966, 105-108

TOPIC TAGS: acoustic signal, pulse generator, electroacoustics, acoustic equipment, sound transmitter, hydraulic device

ABSTRACT: The generator descibed (Fig. 1) offers much better stability of pulse sequences than can be obtained from the explosive or spark methods. Comapred with

Fig. 1. Diagram of generator. 1 - Power supply, 2 - capacitor bank, 3 - switching unit, 4 - power contactor, 5 - sealed coil, 5 - aluminum membrane.

magnetostriction radiators, it is simpler in construction, more reliable, and can be more readily adapted for the generation of large power. The operation is



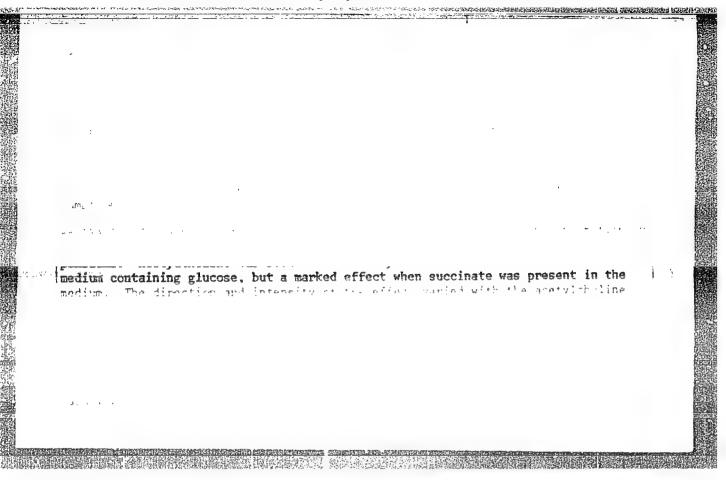
Cord 1/2

"APPROVED FOR RELEASE: 08/31/2001 CI

CIA-RDP86-00513R001859210016-8

AT6033314 ACC NRI based on discharging a large capacitor through a coil which is inductively coupled to a nonmagnetic electrically conducting membrane. The hydroacoustic pulse is produced as a result of interaction between the current and the coil and the eddy currents in the membrane. The article is devoted to the analysis of the equivalent circuit and the transients in such a generator, a determination of the critical mode when the interaction between the membrane and the coil is maximal, and plots of the membrane displacement against the applied voltage and against the gap between the coil and the membrane. The results show that to increase the interaction it is necessary to increase to maximum the coupling between the coil and the membrane, but the use of a magnetic core to improve the coupling is not advantageous. Orig. art. has: 3 figures and 13 formulas. OTH REF: ORIG REF: BUEM DATE: 19May66/ Card

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210016-8"



ACCESSION NR: AP501721	 3		, 1
mattem atoms 30 and 30		togueur donabatea (Trosum Valora et la fill de la fill Valora et la fill de la fill Valora et la fill de la fill Valora et la fill de la fill	r. .
	fizining:: In the Turburble substitution of sciences, state	Akademii nauk SSSP (Institu	ପ୍ର
of edadioroga, a greate	,		
NO REF SOV: 004	INER: Six		

VDOVICHENKO, L.M.

Effect of acetylcholine on the swelling and respiration of the liver mitochondria. TSitologiia 7 no.6:756-759 N-D *165. (MIRA 19:1)

1. Laboratoriya funktsional'noy neyrokhimii Instituta fiziologii AN SSSR, Leningrad. Submitted February 26, 1965.

VDOVICHENKO, L. M., SHERETHE, M. A., MARSHEN, A. M., GORTHUREN, T. A. (USOR)

"The Site of Carnosine Synthesis in the Body."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 August 1961

.VDOVICHENKO, L.M.; DEMIN, N.N.

Acetylcholine and respiration of mitochondria in brain cells. Dokl. AN SSSR 162 no.6:1434-1436 Je '65. (MIRA 18:7)

1. Institut fiziologii im. I.P.Pavlova AN SSSR. Submitted August 26, 1964.

TUPIKOVA, Z.N.; VDOVICHENKO, L.M.; SALTYKOVA, T.P.

Carbohydrate metabolism during medication sleep and waking. Nerv. sist. no.1:33-43 160. (MIRA 13:9)

1. Kafedra biokhimii, Leningradskiy ordena Lenina gosudarstvennyy universitet im. A.A. Zhdanova.
(CARBOHYDRATE METABOLISM) (SLEEP)

```
Commodine formation in the liver and muscles of the frog.
Debt. 1 0000 1/1 no. 1.010 235 1 157.

1. Date: catelogis Maderia meditainship make 100.

(CITE 10. 1000 1/1 no. 1.010 1/1 make 100.

(CITE 10. 1000 1/1 (1.000 1/1) (1.000 1/1) (1.000 1/1)

(CITE 10. 1000 1/1)

(CITE 10. 1000 1/1)
```

POCHINOK, V.Ya.; VDOVICHENKO, L.P.

Synthesis of thiourethanes and rhodanides in the bensothiasole series. Ukr.khim.shur. 19 no.1:61-64 *53. (MIRA 7:4)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko, kafedra organicheskoy khimii. (Urethanes) (Thiocyanates)

VDOVICHENKO, N.Kh.; DMITRASHKO, I.I., kand. tekhn. nsuk; ZHELUDKOV, A.P.; ZLOMANOV, L.P.; KALPIN, G.Z.; NIZHNYY, N.I.; NIKITINA, M.V.; ROMANENKO, I.N.; BUDARINA, V., red.; USTINOV, M., red.; KIRSANOVA, I., mladshiy red.; NOCINA, N., tekhn. red.

[Agricultural wages in the U.S.S.R.] Oplata truda v sel'skom khoziaistve SSSR. [By] Vdovichenko, N.Kh. i dr. Moskva, Sotsekgiz, 1962. 147 p. (MIRA 15:6) (Agricultural wages)

ACCESSION NR: AP4043650

\$/0056/64/047/002/0715/0719

TO DEPOSIT A TOTAL PROPERTY OF THE PROPERTY OF

AUTHOR: Vdovichenko, N. V.

TITLE: Calculation of the partition function of a plane dipole

lattice "

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 715-719

TOPIC TAGS: statistical function, partition function, lattice constant, statistical mechanics, dipole lattice

ABSTRACT: The Onsager solution (Phys. Rev. v. 65, 117, 1944) of the problem of the partition function of the two-dimensional Ising model is calculated by a method which is close to that used by Kac and Ward (Phys. Rev. v. 88, 1332, 1952). The calculation constitutes essentially a direct summation and avoids as far as possible the use of concepts not contained in the formulation of the problem. In particular, no artificial "one-dimensional" denumeration of the

Card 1/2

ACCESSION NR: AP4043650

lattice point is required. The calculation shows the way in which the summation over loops of a special type, which occur in partition-function sums, reduces in this case to a summation over all possible loops. The summation over all loops is further reduced to a random-work problem and is easily calculated. "In conclusion I thank V. Ya. Faynberg for guidance, G. V. Ryazanov and Yu. B. Rumer for useful criticism and advice, and T. N. Khazanovich for many valuable remarks." Orig. art. has: 8 formulas and 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 04Mar64

ENCL: 00

SUB CODE: M, 88

NR REF SOV: 001

OTHER: 007

Card 2/2

	The state of the s
SOURCE:	Zhurnal eksperimentar hog : George
526-530	
, ,-	The line of the day forms maken, programmed magnetication, magnetic
· · · · · · · · · · · · · · · · · · ·	Control of the Contro
попері.	Commensation of the state of th
1202 411 4	. The special control of calculating the special cancer and the special control of calculating the special control of cal
•	
. , -	
Card " "	

		and a second of the second of	
1 75461266 1 7 7 7 7 8 8			
	•		
e Ajese es			
• •			
is transformed			
t .			
	. • . •	tayett, and war to a	
		• •	i .
	,		
•			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
* **			
) Cara			

VDOVICHENKO, N.V.

Spontaneous magnetization of a plane dipole lattice. Zhureksp. i teor. fiz. 48 no.2:526-530 F '65. (MIRA 18:11)

VDOVICHENKO, N.V.

Galculation of the statistical sum for a plane dipole lattice. Zhur. eksp. 1 teor. fiz. 47 no.2:715-719 Ag '64. (MIRA 17:10)

l. Institut khimicheskoy fiziki AN SSSR.

SOV/112-57-6-13243

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 6, p 231 (USSR)

AUTHOR: Vdovichenko, P. V.

TITLE: Line Production of Paper Capacitors

(Potochnaya liniya proizvodstva bumazhnykh kondensatorov)

PERIODICAL: Obmen opytom. M-vo radiotekhn. prom-sti SSSR, 1955,

Nr 10-11, pp 82-101

ABSTRACT: Bibliographic entry.

Card 1/1

OF STREET STREET, STREET AND STREET STREET STREET, STREET STREET, STRE

YAKOVLEV, B.V.; ZELENSKIY, M.Ye.; VDOVICHENKO, S.G.

Book reviews and bibliography. Transp. stroi. 15 no.7:58-59 J1 '65. (MIRA 18:7)

1. Zaveduyushchiy kafedroy izyskaniy i proyektirovaniya zheleznykh dorog Dnepropetrovskogo instituta inzhenerov zheleznodorozhnogo transporta (for Yakovlev). 2. Glavnyy spetsialist Dneprogiprotransa (for Zelenskiy).

VDOVICHENKO, S.G., inzh.

Useful reference manual for engineering surveyors. Transp. stroi. 14 no.4:57-58 Ap 164. (MIRA 17:9)

VDOVICHENKO, S.G.

Manual on engineering surveys for construction. Prox. stroi. 41 no.6:p.3 of cover Je 164. (MIRA 17:9)

OSMINKIN, Yakov Mikhaylovich,; VDOVICHENKO, S.G., nauchnyy red.; VLASOVA, Z.V., red.; LEVOCHKINA, L.I., tekhn. red.

[Safety engineering in operating railroads in shipbuilding yards]
Tekhnika bezopasnosti pri ekspluatatsii zheleznodorozhnogo
transporta na sudostroitel'nykh predpriiatiiakh. Leningrad, Gos.
soluznoe izd-vo sudostroit.promyshl., 1958. 65 p. (MIRA 11:11)
(Railroads, Industrial--Safety measures)

是是是一个人,这个人的人,我们就是这个人的人,我们就是这个人的人,这个人的人,我们们的人,这个人的人,我们们的人,我们就是这个人的人,我们就是这个人的人,我们就是

VDOVICHENKO, Serrey Georgiyevich; KHOST, N.Ye., red.;

?shirSkiy, Ya.V., red.

[Surveyor's gulde] Sputnik tayskatelia. Moskva, Emergita,
1965. 548 p. (MIRA 18:12)

VDOVICHENKO, V.

Rezervy uvelicheniia propusknoi sposobnosti odnoputnykh zheleznodorozhnykh linii. / Resources for increasing traffic capacity of single-track railroad lines /. (Zhel-dor. transport, 1947, no. 3, p. 67-71).

"A good article discussing breaking point for switch-over, and capacity during switch-over. Also construction cost.."

DLC@ HE7Z5

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

VDOVICHENKO, V.T.

Apparatus for the automatic transfer of gas from the burette to the absorption pipette of the gas analyzer. Zav.lab. 22 no.5:609-610 156. (MLRA 9:8)

 Institut ispol'zovaniya gaza Akademii nauk USSR. (Chemical apparatus) (Gases--Analysis)

VDOVICHENKO, V., inzh.-mayor puti i stroitel'stva.

Potentialities for an increase of the capacity of single-track railroads. Zhel. dor. transp. no.3:67-71 '47. (MIRA 13:2) (Railroads--Traffic)

(MIRA 11:11)

VDOVICHENKO, Vladimir Nikolayevich,; NESTEROV, Ye.P., red.; BOBROVA,

Te. N., tekhn. red.

[Traffic capacity of reilroad lines and ways of increasing it]

Propusknais sposobnest zheleznodorozhnykh linii i sposoby ee
usileniis. Meskva, Gos. transp. zhel-der. izd-ve, 1958. 157 p.

(Railroads--Traffic)

VDOVICHENKO, V.N., inzherer.

Improving calculation methods for receiving and departure yards of section stations. Zhel. der.transp.37 no.4:51-54 Ap '56.(MLRA 9:7)

(Railroads--Stations)

VDOVICHENAU V. IV.

N/5 755.23 .V3

VdoVichenko, Vladimir Nikolayevich

Propusknaya Sposobnost! Zheleznodorozhnykh Liniy I Sposoby Yeye Usileniya

The Capacity of the Railway Line and its System of Reinforcement

Moskva, Transzheldorizdat, 1958

157 p. Diagrs., Graphs, Tables

VDOVICHENKO, V. N. (Ing.)

"Srosoby Usileniya Propusknoi Sposopnosti Cdnoputnykh Zheleznykh Dorog,"
(Methods of Increasing the Passing Capacity of Single Gauge Railways), 95 p.,
State Railway Transportation Publ., Moscow 1951.

ACC NR: AP60290	SOURCE CODE: UR/0413/66/000/014/0021/0021
INVENTOR: Khash	cin, I. G.; Kondratenko, V. I.; Vdovichenko, V. T.
ORG: none	
TITLE: Preparat	ion of α-cyanoisopropyl-N-aryl carbamates. Class 12, No. 183733.
	prom obraz tov zn, no. 14, 1966, 21
pound ABSTRACT: In th an a- 40°C duct and t	moisopropyl aryl carbamate preparation, cyanoisopropyl aryl chloro- amine, tertiary amine, organic cyanate compound, amine, carbon com- e proposed method for the preparation of the title compounds, cyanoisopropyl chloroformate is treated with an amine at -10 to in an inert solvent (toluene or ethyl ether) and the final pro- is isolated by a known method. To increase the reaction rate bind the HCl formed, an excess of the initial amine or a ter- amine over stoichiometric proportions is used. [WA-50; CBE No. 11]
SUB CODE: 07/	SUBM DATE: 05Jun65/
Card 1/1.	UDG: 547.495.1.07

ACC NR: AP6029016	SOURCE CODE: UR/0413/66/000/014/0021/0021
INVENTOR: Khaskin, I.	G.; Kondratenko, V. I.; Vdovichenko, V. T.
ORG: none	1
TITLE: Preparation of	n-cyanoisopropyl-N-aryl carbamates. Class 12, No. 183733.
SOURCE: Izobret prom	braz tov zn, no. 14, 1966, 21
formate, primary amine,	opyl aryl carbamate preparation, cyanoisopropyl aryl chloro-, tertiary amine, organic cyanate compound, amine, carbon com-
an α-cyanois 40°C in an i duct is isol	sed method for the preparation of the title compounds, opropyl chloroformate is treated with an amine at -10 to nert solvent (toluene or ethyl ether) and the final pro-
and to bind	the HCl formed, an excess of the initial amine or a ter- over stoichiometric proportions is used. [WA-50; CBE No. 11]
SUB CODE: 07/ SUBM DA	TE: 05Jun65/
·	
Card 1/1.	UDC: 547.495.1.07

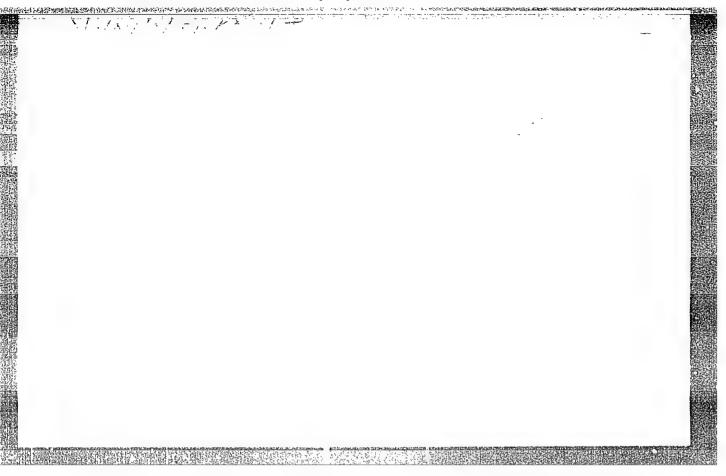
MATYAKH, F.A.; VDOVICHENKO, V.T.; TSYBUL'SKAYA, Z.I.

Calculating the stages of the thermal chlorination of methane on the basis of change of the isobaric-isoentropic potential of the process. Khim. prom. no.4:250-254 Ap '63. (MIRA 16:8)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210016-8"

MATYAKH, F.P.; VDOVICHENKO, V.T. [Vdovychenko, V.T.]; ISAYENKO, O.F. [Isaienko, O.F.]

Calculating the multiplicity factor of the recirculation of the products of reaction in the deep thermal chlorination of methane. Khim. prom. [Ukr.] no.1254-60 Ja-Mr. 63 (MIRA 1787)





PHASE I BOOK LAPLOITATION 80V/3538

Vdovýchenko, Vasiliy Terent'yevich, Candidate of Technical Sciences

Syrovynna baza rozvytku khimichnoyi promyslovosti na Ukrayini (Raw Material Sources for Development of the Chemical Industry in the Ukraine) Kyyiv, 1959. 46 p. (Series: Tovarystvo dlya poshyrennya politychnykh i naukovykh znan' Ukrayins'-koyi RSR. Ser. 5, No. 19) 24,200 copies printed.

Chief Ed.: P.S. Makovets'kiy, Candidate of Technical Sciences; Ed.: V.V. Kovalevs'kiy.

PURPOSE: The book is intended for students studying the economic geography of the Ukraine, particularly for those interested in the development of the chemical industry.

COVERAGE: This is a popular exposition on basic raw materials of the chemical industry. Processing of coal, natural gas, petroleum, wood, etc. for obtaining chemical products is briefly sketched. Sources and deposits of those raw materials in the Ukraine are indicated. There are no references given.

Card 1/3

Raw Material Sources (Cont.)	sov /3538			
TABLE OF CONTENTS:				
Wonder Materials	3			
Black Gold	6			
Natural Gas as a Chemical Raw Material	15			
Thermal Decomposition of Natural Gas	20			
Conversion of Methane	23			
Oxidation of Methane	26			
Acetylene from Natural Gas				
Chloroform and other Derivatives from Methane and Chlorine				
Other Methods of Chemical Utilization of Natural Gas .	31			
Ethane as Raw Material for Production of Ethyl Alcohol and Pla	stics 33			
Card 2/3				

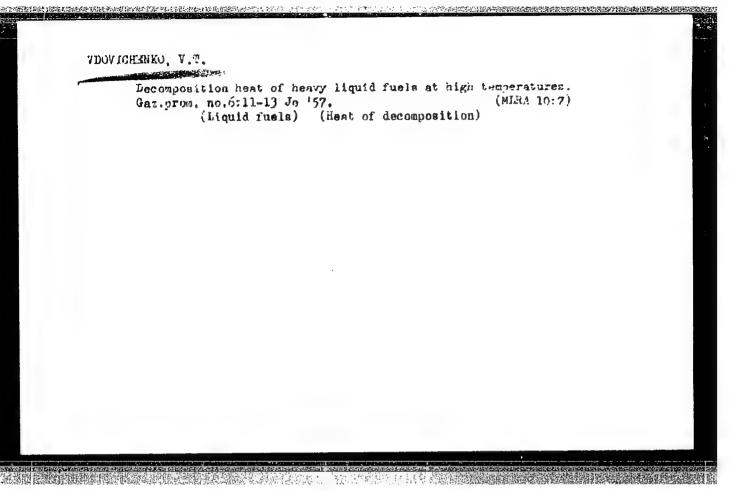
•			
.Raw Material Sources (Cont.)		80V/3538	
Petroleum and Petroleum Produ	acts are Also Chemical Raw Material	2	35
Wood, Reed, and Waste Farm Pr	roducts are Also Chemical Raw Materia	a 1	40
That's What Mineral Salts are	· !	1	43
AVAILABLE: Library of Congre	88		
Card 3/3		TH / 5-1	/ mas 13-60

VDOVICHENKO, V.T.; GALENKO, N.P.; SARISHVILI.

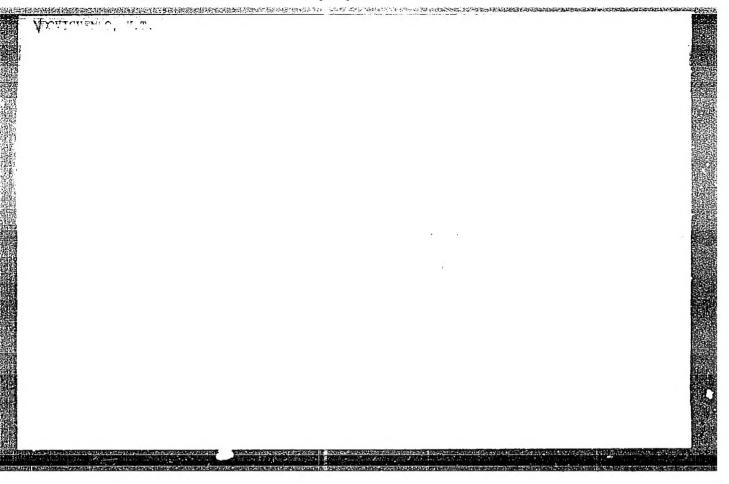
Investigating methans chlorination in melts of chloride salts of metals.

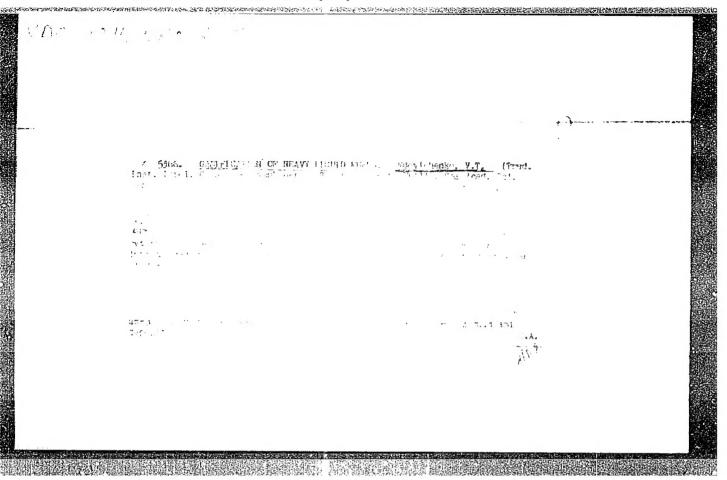
Ukr, khim. shur. 23 no.1:110-116 '57. (MIRA 10:6)

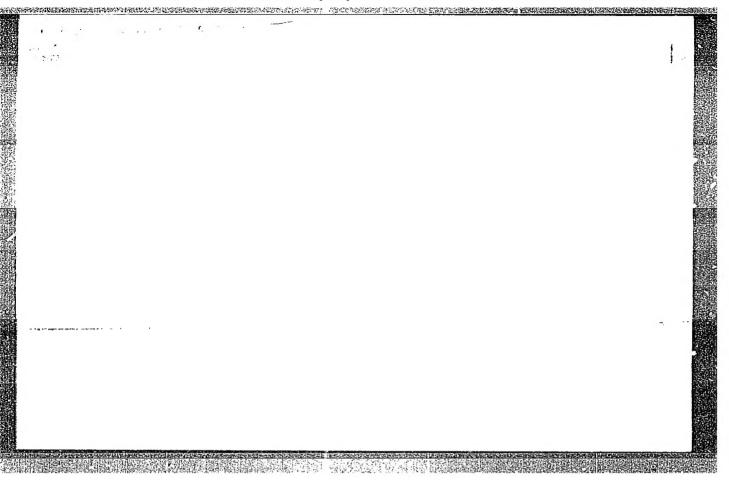
1. Institut ispol'sovaniya gasa Akademii nauk USER.
(Methane) (Chlorination)



VDUVICHENKU, V. T., Master Tech Sci — (wiss) "Livestigation of the gasification of furnace oil and peat resin with a view to developing ruel gas." Moscow, 1957, 15 pp.(AS USSR. Inst of Oil), 100 copies. (AL, N. 40, 1957, p.92)







A STORY OF THE SECOND STATE OF THE SECOND STAT

VDOVICHENKO, V. T., GALENKO, N. P.

Producing chlorine derivatives of methane by the oxidative chlorination of natural gas. Gas.prom. 5 no.4:37-41 Ap '60. (MIRA 13:8)

(Gas, Matural) (Chlorination) (Methane)